Testimony of the

Connecticut Society of Eye Physicians

In SUPPORT of

RB 872: AAC THE USE OF INDOOR TANNING DEVICES BY PERSONS UNDER EIGHTEEN YEARS OF AGE.

To the Public Health Committee

On March 15, 2013

Good afternoon Senator Gerrantana, Representative Johnson and other distinguished members of the Public Health Committee. My name is Dr. Jeffrey Sandler and I am an ophthalmologist practicing in Bridgeport. I am a Past President of the Connecticut Society of Eye Physicians and I am on the Council of the American Academy of Ophthalmology where I represent the interests of Connecticut ophthalmologists and their patients. I am here today representing more than 300 Connecticut ophthalmologists who strongly support RB 872: An Act Concerning the Use of Indoor Tanning Devices by Persons Under Eighteen Years of Age.

Our eyes exist only for the sake of light, without which they would be useless, and yet light can be destructive to the tissues of the eye. That is particularly true for the ultraviolet light that we cannot see or make practical use of, apart from the need to satisfy a faddish cosmetic desire. The carcinogenic effects of ultraviolet light are well known, and the concerns of our dermatology colleagues well placed. Cancers of the eyelid, the surface of the eye, and even deep within the eye are only too well known to ophthalmologists. Well controlled studies of fishermen on the Chesapeake Bay have shown that have the exposure to natural ultraviolet light significantly accelerates cataract formation, and UVA, the type of ultraviolet light used in tanning booths has been implicated in the progression of macular degeneration, a serious vision threatening disease that can cause irreversible loss of vision and function. Although tanning booths offer and recommend eye protection, the age group under consideration is susceptible to the perceived pressure to achieve a uniform tan and may not fully appreciate the risks they take. Tanning parlors have no ability to monitor compliance with eye protection of clients who are inside an enclosed booth. Moreover, a recent Congressional study (http://abcnews.go.com/Health/federal-investigation-finds-indoor-tanning-salons-deny-health/story?id=15483714) has shown that the clients of tanning parlors are frequently misled about the health risks of indoor tanning. Attached below are abstracts from three medical journal articles that document these risks.

For the sake of sight, let's turn off these tanning lights. The ophthalmologists of Connecticut urge you to support this important legislation that seeks to protect minors from the damaging effects of indoor tanning under ultraviolet light.

Thank you for your consideration.

Respectfully,

Jeffrey Sandler, MD

Trans Am Ophthalmol Soc. 1989;87:802-53.

Ultraviolet radiation and the eye: an epidemiologic study.

Taylor HR.

Source

Dana Center for Preventive Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Abstract

Circumstantial evidence from biochemical, animal, and epidemiologic studies suggests an association between exposure to UV-B radiation (290 nm to 320 nm) and cataract. Such an association had not been proven because it had not been possible to quantify ocular UV-B exposure of individuals or to reliably grade the type and severity of cataract in field studies. We undertook an epidemiologic survey of cataract among 838 watermen who work on the Chesapeake Bay. Their individual ocular UV-B exposure was quantified for each year of life over the age of 16, on the basis of a detailed occupational history combined with laboratory and field measurements of ocular UV-B exposure. Cataracts were graded by both type and severity through clinical and photographic means. SMD changes were ascertained by fundal photography. A general medical history was taken to discover potentially confounding factors. This study showed that people with cortical lens opacities had a 21% higher UV-B exposure at each year of life than people without these opacities. A doubling in lifetime UV-B exposure led to a 60% increase in the risk of cortical cataract, and those with a high annual UV-B exposure increased their risk of cortical cataract over threefold. Corneal changes, namely pterygium and CDK, were also strongly associated with high UV-B exposure. No association was found between nuclear lens opacities or macular degeneration and UV-B exposure. This study also indicated several simple, practical measures, such as wearing spectacles or a hat, that effectively protect the eye from UV-B exposure. Thus it is easily within the power of individuals to protect their eyes from excessive UV-B exposure and reduce their risk of cortical cataract. A program of public education in this area could be a cost-effective means of reducing this important disease.

Int J Cancer. 2004 Dec 10;112(5):896-900.

Artificial ultraviolet radiation and ocular melanoma in Australia.

Vajdic CM, Kricker A, Giblin M, McKenzie J, Aitken JF, Giles GG, Armstrong BK.

Source

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Abstract

We examined risk of ocular melanoma with exposure to artificial sources of exposure to ultraviolet radiation (UVR) in a population-based epidemiologic study of 290 cases of ocular melanoma and 893 controls aged 18-79 years in Australia in 1996-1998. Cases were identified through a prospective survey of all ophthalmologists and cancer registries in Australia; 91.8% participated. Controls were sourced from electoral rolls; 67.4% of those who were eligible and contactable participated, while 27.3% could not be contacted. Exposure to welding and use of sunlamps, including sunbeds and tanning booths, was measured by telephone interview. Analyses used unconditional logistic regression and included age, sex, region of birth, eye color, ocular and cutaneous sun sensitivity and personal sun exposure as covariates. Risk of choroid and ciliary body melanoma in 246 cases increased significantly with longer duration of use of sunlamps, first use before 21 years of age and first use after 1980. These effects were independent of personal sun exposure. Risk of these melanomas also increased with increasing duration of welding exposure, although the trend was not significant overall. There was no evidence that these exposures increased the risk of iris (n = 25) or conjunctival (n = 19) melanomas. Personal exposure to sunlamps and welding predicts risk of choroid and ciliary body melanoma in Australia.

PMID: 15386378 [PubMed - indexed for MEDLINE]

http://www.ncbi.nlm.nih.gov/pubmed/15386378

Eye Contact Lens. 2011 Jul;37(4):246-9. doi: 10.1097/ICL.0b013e31821cbcc9.

Ultraviolet radiation as a risk factor for cataract and macular degeneration.

Roberts JE.

Source

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Abstract

The human eye is constantly exposed to sunlight and artificial lighting. Light transmission through the eye is fundamental to its unique biological functions of directing vision and circadian rhythm, and therefore, light absorbed by the eye must be benign. However, exposure to the intense ambient radiation can pose a hazard particularly if the recipient is over 40 years of age. This radiation exposure can lead to impaired vision and transient or permanent blindness.Both ultraviolet-A (UV-A) and UV-B induce cataract formation and are not necessary for sight. Ultraviolet radiation is also a risk factor for damage to the retinas of children. The removal of these wavelengths from ocular exposure will greatly reduce the risk of early cataract and retinal damage. One way this may be easily done is by wearing sunglasses that block wavelengths below 400 nm (marked 400 on the glasses). However, because of the geometry of the eye, these glasses must be wraparound sunglasses to prevent reflective UV radiation from reaching the eye. Additional protection may be offered by contact lenses that absorb significant amounts of UV radiation.In addition to UV radiation, short blue visible light (400-440 nm) is a risk factor for the adult human retina. This wavelength of light is not essential for sight and not necessary for a circadian rhythm response. For those over 50 years old, it would be of value to remove these wavelengths of light with specially designed sunglasses or contact lenses to reduce the risk of age-related macular degeneration.

PMID: 21617534 [PubMed - indexed for MEDLINE]